

Unit 2



Learning from Apollo

The Lunar Disk
Apollo Landing Sites
Regolith Formation
Lunar Surface
Differentiation
Impact Craters
Clay Lava Flows
Lava Layering
Lunar Landing Sites
Lunar Roving Vehicle
Moon Anomalies

The U.S. Space Program called Apollo achieved monumental goals including the collection and return of rock and sediment samples from the Moon. Analyses of the samples by scientists worldwide continue to give us new insight to the forces that shaped the early solar system, the Moon, and maybe most importantly, Earth. This excitement of discovery, a legacy of the Apollo program, is the theme of Unit 2.

The highlight of this unit is the Lunar Sample Disk. Classroom activities focus on the Moon's rocks, surface features, and the geologic processes that formed them. Students are then given the opportunity to plan their own lunar missions in the “Lunar Landing Sites” and “Lunar Roving Vehicle” activities. The last activity of the unit presents four anomalies of the Moon for investigation and interpretation.

A Resource Section for Unit 2 is on Page 38.

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Resource Section

This list presents possible independent and commercial sources of items to complement the activities in Unit 2. The sources are offered without recommendation or endorsement by NASA. Materials from the U.S. Government Printing Office also are included. Inquiries should be made directly to the appropriate source to determine availability, cost, and ordering information before sending money. Contact your NASA Educator Resource Center (see Page 146) for more resources available directly from NASA.

Books

Apollo Over the Moon: A View From Orbit, NASA SP-362, 1978, 255 p. Annotated picture book of lunar geologic features. U.S. Government Printing Office, Superintendent of Documents P.O. Box 371954 Pittsburgh, PA 15250-7054 phone 1-202-783-3238

Apollo Expeditions to the Moon, NASA SP-250, 1975, 313 p. Illustrated chronicle of the Apollo missions with a focus on the engineering and teamwork that made the missions possible. U.S. Government Printing Office, same as above.

The Moon, by Patrick Moore, 1981, Rand McNally and Co., 96 p. Illustrated with maps, drawings, and Apollo mission photographs. Also gives descriptions of unmanned missions including Russian Luna probes.

To Rise From Earth: An Easy to Understand Guide to Space Flight, by Wayne Lee, 1993, Texas Space Grant Consortium (ISBN 0-9637400-3-2), 279 p. Detailed, non-mathematical discussions of orbital mechanics, Apollo missions, and the Shuttle.

To A Rocky Moon: A Geologist's History of Lunar Exploration, by Don E. Wilhelms, 1993, Univ. of Arizona Press, 477 p.

Carrying the Fire: An Astronaut's Journeys, by Michael Collins, 1974, Ballantine Books, 488p. p.

Apollo and the Moon Landing, by Gregory Vogt, 1991, Millbrook Press, 112 p. An illustrated text in the Missions in Space Series for grades 4-6.

Slides

The Apollo Landing Sites, set of 40 slides Lunar and Planetary Institute 3600 Bay Area Boulevard Houston, TX 77058-1113 phone 1-281-486-2172 or fax 1-281-486-2186

Videos

Out of This World: The Apollo Moon Landings, Finley-Holiday Film Corp./Steve Skootsky, 1993, 60 minutes. Historically accurate video using newly restored NASA footage. Finley-Holiday Film Corp. P.O. Box 619 Whittier, CA 90608 phone 1-800-345-6707

Rockets and Models

Estes Industries P.O. Box 227 Penrose, CO 81240

Other Teacher's Guides

Exploring Meteorite Mysteries: Teacher's Guide with Activities, NASA EG-1997-08-104-HQ. Marilyn Lindstrom et. al., 1997.

Rockets: Physical Science Teacher's Guide with Activities, NASA EP-291. Gregory L. Vogt, 1993.